

Summary

Literature Review on the Public Health Effects from Wireless Telephone and Wireless Communication Facilities

In response to Mr. Fichtenberg's testimony during the November 8, 2000 State Board of Health meeting, Board staff conducted a cursory review of the scientific literature on the public health effects from radio frequency (RF) radiation exposure originating from wireless telephones and wireless communication facilities. During this process, staff consulted with Patti Waller, the Department of Health's lead epidemiologist on the subject.

In general, research exploring the public health effects of wireless technology are limited and their findings inconclusive. The epidemiological data on the human health effects from RF exposure are few in number. It is also difficult to extrapolate from the existing animal data, or from one exposure frequency to another.

Board staff reviewed the June 2000 Independent Expert Group on Mobile Phones (IEGMP) Report -*Mobile Phones and Health*, the current most comprehensive review of the scientific literature on the health effects from exposure to RF radiation. This report, commissioned by the British government, included both presentations of the data and a summary of recommendations for policy makers. (Summary and Recommendation section is attached.) In very abbreviated terms, the report concluded the following:

- One of the most established health risk from wireless telephones is its indirect effect on motor vehicle accidents. Evidence supports that there is an increased risk of motor vehicle accidents when the driver is using a cellular telephone. The data does not show any difference in effect with hand-held or hands-free devices. (IEGMP Report, 101)
- Evidence is available to show the hazards associated with the potential interference of RF radiation from wireless telephones with electronic equipment in hospitals. (IEGMP Report, 101)
- Data is available to show that exposure to wireless telephone signals at intensities within existing guidelines has direct, short-term effects on the electrical activity of the human brain and on cognitive function. There is no evidence in the literature to determine whether these direct effects have any consequences for health. There is also no evidence available to determine whether or not these effects are caused by local elevation of temperature or, by some other "non-thermal" mechanism. (IEGMP Report, 102)
- Current epidemiological evidence does not suggest that RF radiation exposure causes cancer. This finding is consistent with more recently published epidemiological studies and the available biological evidence, which suggests that RF fields below

guidelines do not cause mutation, or initiate or promote tumor growth. However, wireless telephones have not been in use long enough to allow for adequate long-term assessment of their impact on health. (IEGMP Report, p. 101)

- Experimental studies on cells and animals do not suggest that RF radiation from wireless telephones below existing guidelines have damaging effects on the heart, blood, immune system or on the reproductive system. (IEGMP Report, 102)

In December 2000, the British government delivered a broad precautionary response to the related health concerns raised in the IEGMP Report. The chief medical officers from England, Wales, Scotland and Northern Ireland are encouraging people to minimize their exposure to radio waves and strongly advising children under 16 to use handsets only when essential and keep all calls short. (See attached news article)